

Notice of Allowability

Application No.

10/081,525

Applicant(s)

WISSNER ET AL.

Examiner

Luke S. Wassum

Art Unit

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicants' amendment, filed 7 November 2005.
2. ☒ The allowed claim(s) is/are 1-42.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

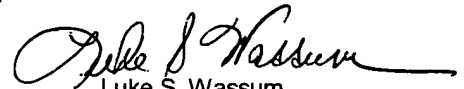
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Luke S. Wassum
Primary Examiner
Art Unit 2167

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DETAILED ACTION

Response to Amendment

1. The Applicants' amendment, filed 7 November 2005, has been received, entered into the record, and considered.
2. As a result of the amendment, claims 1, 21 and 35 have been amended. Claims 1-42 remain pending in the application.

The Invention

3. The claimed invention is a database management system including request handler modules, a master control module and a plurality of database servers. The master control module assigns database servers to databases and matches client database requests (relayed from request handler modules) to the database server which has been assigned the requested database, while the request handler modules receive requests from clients and after receiving database server information from the master control module, passes the request to the database server assigned to the desired database.

Declaration under 37 C.F.R. § 1.132

4. The declaration filed by co-inventor James Salem on 7 November 2005, together with the accompanying exhibit ("QuickBase Multi-Process System Architecture", dated 20 December 2001) is sufficient to establish the fact that the features claimed in independent claims 1, 11, 21, 28 and 35 were not included as part of the Intuit QuickBase product prior to 21 February 2001.

Accordingly, the pending rejections of all claims under 35 U.S.C. § 102(b) are withdrawn.

EXAMINER'S AMENDMENT

5. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR

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1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with attorney Daniel R. Brownstone on 17 January 2006.

The application has been amended as follows:

Please amend the following claims:

12. (Currently amended) The system of claim 11, wherein the master control module is further adapted to determine the assigned database server from the plurality of database servers by determining that the database request is a request to create a database, generating a database identifier for the database, and mapping the database to the assigned database server using the database identifier.

13. (Currently amended) The system of claim 12, wherein the master control module is further adapted to receive a subsequent database request containing the database identifier, use the database identifier to determine the assigned database server, and provide the subsequent database request to the assigned database server for handling the subsequent database request.

14. (Currently amended) The system of claim 11, wherein the master control module is further adapted to determine the assigned database server from the plurality of database servers by determining that there is no database server assigned to handle the database request, assigning a selected database server from the plurality of database servers as the assigned database server, and updating a mapping of previously created databases to their respective database servers to include the assignment of the selected database server to the database.

15. (Currently amended) The system of claim 11, wherein the master control module is further adapted to respond to a failure in handling the database request by the assigned database server by assigning the database request to an alternative database server selected from the plurality of database servers, and identifying the alternative database server to the request handling module responsive to the database request.

16. (Currently amended) The system of claim 11, wherein the master control module is further adapted to assign the database request to an alternative database server selected from the plurality of database servers, and to identify the alternative database server to the request handling module responsive to the database request.

17. (Currently amended) The system of claim 11, wherein the request handling module is further adapted to respond to an elapsed time for handling the database request by the assigned database server exceeding a threshold by instructing the assigned database server to terminate the handling of the database request, and wherein the master control module is adapted to then assign the database request to an alternative database server selected from the plurality of database servers.

18. (Currently amended) The system of claim 11, wherein the master control module is further adapted to maintain location information for a plurality of request making clients corresponding to a particular database associated with the database request, and to assign the database request to an alternative database server selected from the plurality of database servers by analyzing the location information for the plurality of request making clients.

20. (Currently amended) The system of claim 11, wherein the master control module is further adapted to assign the database request to an alternative database server selected from the plurality of database servers, based upon a comparison of a first expected load on the assigned database server and a second expected load on the alternative database server.

28. (Currently amended) An apparatus for handling database requests for client systems over a network, the apparatus comprising:

a plurality of database servers;

a database server managing module, adapted to communicate directly with the plurality of database servers, for prompting the database servers to load databases, the database server managing module further adapted to assign a previously existing database to an assigned database server selected from the plurality of database servers and to determine that the assigned database server corresponds to a database request by examining a set of information about the database request; and

a request handler communications module, for receiving the set of information about the database request from a request handler, and sending an identification of the assigned database server to the request handler.

29. (Currently amended) The apparatus of claim 28, wherein the set of information about the database request includes a database identifier for the previously existing database, and the database server managing module is further adapted to use the database identifier to determine that the previously existing database corresponds to the assigned database server.

30. (Currently amended) The apparatus of claim 28, wherein the database server managing module is further adapted to assign the databases to the database servers by determining that the previously existing database is not currently assigned to a database server, assigning a selected database server from the plurality of database servers as the assigned database server, and updating a set of database identifiers that correlate previously created databases to their respective database servers to include the assignment of the selected database server to the previously existing database.

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31. (Currently amended) The apparatus of claim 28, wherein the database server managing module is further adapted to assign the database request to an alternative database server selected from the plurality of database servers, and wherein the request handler communications module is further adapted to identify the alternative database server to the request handler.

In claim 35, please change the limitation

"receiving by the master control module a set of information about a database request from the request handler;"

to

-- receiving by the master control module a set of information about a database request from a request handler; --

Allowable Subject Matter

6. Claims 1-42 are allowed.

7. The following is an examiner's statement of reasons for allowance:

The present invention is directed to a method and system for handling database requests for client systems over a network, wherein a request is transmitted from a request handler to a master control module which determines which database server is assigned to service the request, and then requests said database server to load the required database and returns a database server identifier to the request handler.

The closest prior art of record, **Rierden et al.** (U.S. Patent 5,978,577) teaches a system for routing transactions to the appropriate database server(s).

However, **Rierden et al.** fails to anticipate or render obvious the recited feature of the master control module requesting the assigned database server to load the database corresponding to the request, as in independent claims 1, 11, 21, 28 and 35. Providing such functionality would ensure that the request handler was not burdened with the task of requesting the assigned database server to load the database corresponding to the request, thus allowing the request server to process database requests from clients more quickly.

These features, together with the other limitations of the independent claims are novel and non-obvious over the prior art of record. The dependent claims 2-10, 12-20, 22-27, 29-34 and 36-42 being definite, enabled by the specification, and further limiting to the independent claim, are also allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nilsen et al. (U.S. Patent 5,606,693) teaches a distributed database application for logging large volumes of data to a plurality of database servers.

Nilsen et al. (U.S. Patent 5,668,986) teaches a distributed database application for logging large volumes of data to a plurality of database servers.

Rizvi et al. (U.S. Patent 6,199,110) teaches a method for passing a client from a first server to which the client was connected for accessing a resource, to a second server for accessing a resource.

Lee et al. (U.S. Patent 6,601,101) teaches a hand-off protocol that is transparent to a network client with the advantage that physical devices can be added to, replaced or removed from a network without reconfiguring network clients.

Reunert et al. (U.S. Patent 6,738,773) teaches a method for transferring data between disparate capacity systems.

Wang et al. (U.S. Patent 6,826,613) teaches a method for using a switch to transparently aggregate storage devices.

Yousefi'zadeh (U.S. Patent 6,950,848) teaches a load balancing method for a transaction computer system having multiple database servers for at least one database.

Ohtani et al. (U.S. Patent Application Publication 2001/0051975) teaches a distributed search system that includes a plurality of agents connected to a network that includes an information resource provider.

Ross, JR. et al. (U.S. Patent Application Publication 2004/0148366) teaches an e-commerce outsourcing system that provides hosts with transparent, context sensitive e-commerce supported pages.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luke S. Wassum whose telephone number is 571-272-4119. The examiner can normally be reached on Monday-Friday 8:30-5:30, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jean R. Homere can be reached on 571-272-3780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

In addition, INFORMAL or DRAFT communications may be faxed directly to the examiner at 571-273-4119. Such communications must be clearly marked as INFORMAL, DRAFT or UNOFFICIAL.

Customer Service for Tech Center 2100 can be reached during regular business hours at (571) 272-2100, or fax (571) 273-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Luke S. Wassum
Primary Examiner
Art Unit 2167

lsw

17 January 2006

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